

Linn County

Estimated Economic Contribution of Agriculture, Food, and Food Processing Sectors 6/27/2019

Using the most recent IMPLAN data available (2017) adjusted for 2019, 20 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Linn County economy.¹

These 20 sectors have a total direct output of approximately **\$82.7 million** and support **973 jobs** in Linn County. Running the model for all 20 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Linn County Economy					
Contribution Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵
Direct Effect	973.2	22.23%	\$28,721,042	7.17%	\$82,747,566
Indirect Effect	54.9	1.25%	\$3,663,360	0.91%	\$8,099,120
Induced Effect	-7.5	-0.17%	(\$553,770)	-0.14%	(\$1,056,994)
Total Effect	1020.6	23.31%	\$31,830,632	7.94%	\$89,789,692

As shown in the above table, agriculture, food, and food processing sectors support **1,020 jobs**, or **23.31%** of the entire workforce in the county.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 20 agriculture, food, and food processing sectors is approximately **\$31.8 million**, or **7.94% of the GRP**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

<https://implanhelp.zendesk.com/hc/en-us/articles/115002801513-Considerations-of-Contribution-Analysis>

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **716 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Linn County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	715.9	\$42,429,692
All other crop farming	71.3	\$2,873,833
Landscape and horticultural services	48.6	\$1,825,280
Grain farming	38.6	\$7,265,131
Oilseed farming	32.8	\$17,781,794
Food product machinery manufacturing	17.2	\$4,402,043
Animal production, except cattle and poultry and eggs	11.2	\$734,353
Support activities for agriculture and forestry	9.5	\$252,794
Truck transportation	8.8	\$1,088,418
Real estate	8.3	\$1,165,524

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$42.4 million** to the Linn County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	715.9	\$42,429,692
Oilseed farming	32.8	\$17,781,794
Grain farming	38.6	\$7,265,131
Food product machinery manufacturing	17.2	\$4,402,043
All other crop farming	71.3	\$2,873,833
Landscape and horticultural services	48.6	\$1,825,280
Bread and bakery product, except frozen, manufacturing	7.5	\$1,566,711
Nitrogenous fertilizer manufacturing	1.5	\$1,479,162
Real estate	8.3	\$1,165,524
Wholesale trade	6.6	\$1,164,502

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Linn County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	32.8	\$17,781,793.59
Grain farming	38.6	\$7,265,131.47
Vegetable and melon farming	0.2	\$23,205.09
Fruit farming	3.7	\$220,338.33
Tree nut farming	0.5	\$48,573.19
Greenhouse, nursery, and floriculture production	1.3	\$129,436.25
All other crop farming	71.3	\$2,873,833.18
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	715.9	\$42,429,691.31
Dairy cattle and milk production	4.0	\$1,062,287.57
Poultry and egg production	0.5	\$271,801.23
Animal production, except cattle and poultry and eggs	11.2	\$734,352.53
Commercial logging	3.5	\$93,668.67
Commercial hunting and trapping	3.4	\$67,155.44
Support activities for agriculture and forestry	9.5	\$252,793.94
Bread and bakery product, except frozen, manufacturing	7.5	\$1,566,710.71
Frozen cakes and other pastries manufacturing	0.2	\$32,918.45
Nitrogenous fertilizer manufacturing	1.5	\$1,479,161.74
Food product machinery manufacturing	17.2	\$4,402,042.87
Veterinary services	1.8	\$187,388.49
Landscape and horticultural services	48.6	\$1,825,280.31

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Linn County, the retail sector was omitted.